

REMARKS

Applicants respectfully assert that the foregoing amendment is not being submitted for purpose of delay and does not involve new matter. Specifically, Applicants have amended the specification to correct clerical errors and have directed amended claims 1, 3, 7, 16 - 21, 23, 29, and 31. Claims 1, 3, 7, 13, 21, 23, 29, and 31 were amended to further clarify the claimed inventions, and claims 16 - 20 were amended to correct clerical errors.

Applicants wish to thank Examiner Barron for meeting with Mr. Jeffrey R. Kuester and Mr. Eric M. Ringer and discussing the application. As discussed in the meeting, claim 1 was amended to clarify the interaction of the starting entitlement ID and the entitlement ID.

If, in the opinion of the Examiner, a telephonic conference would expedite entry of the foregoing amendment, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted ,

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ANNOTATED VERSION OF MODIFIED PARAGRAPHS TO SHOW CHANGES
MADE

The following is a marked up version of the amended paragraphs. Amend the following paragraphs by adding the language that is underlined (“ ”) and by deleting the language that is enclosed within brackets (“[]”):

At page 19 lines 6-8 please make the following amendments.

3. Once step [(3)] (2) is done, DHCT 333 can receive EMM 315 with the MSK for the service from the entitlement agent. EMM manager 407 stores the MSK in the allocated space.

At page 25, lines 2-19 please make the following amendments.

DHCTSE 627 stores keys, interprets EMMs and ECMs, and produces FPMs. With the EMMs and ECMs, it does the decryption and authentication required for interpretation and with FPMs, it makes the sealed digest and encrypts the FPM. Thus, in the preferred embodiment, EMM manager 407 is implemented in secure element [617] 627. In addition, DHCTSE 627 provides encryption, decryption, digest, and digital signature services for other applications executing on DHCT 333. Secure element (DHCTSE) 627 includes a microprocessor and memory that only the microprocessor may access. Both the memory and the microprocessor are contained in tamper-proof packaging. In interpreting EMMs, DHCTSE 627 acquires and stores keys and entitlement information; in interpreting ECMs, DHCTSE 627 uses the entitlement information to determine whether DHCT 333 receiving the ECM has an entitlement for the instance of the service which the ECM accompanies; if it does, DHCTSE 627 processes the ECM, and provides the control word to service decryptor module 625 in a form that it may use to decrypt or descramble services. DHCTSE 627 further records purchase information for impulse-purchasable services such as IPPV and stores the purchase data securely until the data is successfully forwarded via a forwarded purchasing message to control suite 607. DHCTSE 627 maintains MSK for the EAs, the private/public key pairs for DHCT 333, and the public keys of the conditional access authorities and the entitlement agents.

In accordance with 37 C.F.R. § 1.121, please find below the amended claims in which the inserted language is underlined (“___”) and the deleted language is enclosed in brackets (“[]”):

1. (Once Amended) Apparatus for representing entitlements for instances of services having entitlement IDs associated therewith in a receiver [that receives the instances of services and the entitlement IDs], the apparatus comprising:

a port for receiving instances of service and at least a first message having an entitlement ID associated with a given instance of service;

a memory having a starting entitlement ID and an indexed map of [having] entitlement values for entitlements associated with instances of service [that have been given to the receiver], wherein the starting entitlement ID is used [with the map and] with the [an] entitlement ID associated with the [a] given instance of service to determine an index into the map for determining the entitlement value associated with the given instance of service, responsive to the entitlement value being a predetermined value, [whether] the receiver is entitled to the given instance of a service, and responsive to the receiver being entitled, [wherein] the receiver grants access to the given instance of service [only if the receiver is entitled to the given instance of service].

3. (Once Amended) The apparatus of claim 2, wherein the starting entitlement ID corresponds to [is] the first entitlement ID in the sequence of entitlement IDs.

7. (Once Amended) The apparatus of claim 3, wherein:

the map is represented by an array of elements having entitlement values that represent the presence or absence of entitlement; and

the index into the map is the difference in the sequence of entitlement IDs between the starting entitlement ID and the entitlement ID associated with the given instance of service[is used to determine the index value for a given element in the array, wherein the given element has the entitlement value of the given instance of service].

13. (Once Amended) The apparatus of claim 12, wherein:
the memory includes at least a second map and at least a second starting entitlement ID,
wherein the first map and the first starting entitlement ID are associated with a
first entitlement agent, and the at least second map and the at least second
starting entitlement ID are associated with at least a second entitlement agent,
wherein the first message specifies the first entitlement agent and a second
message specifies the at least second entitlement agent, responsive to the second
message the at least second map and the at least second starting entitlement ID
are set [receiver is given entitlements by at least one entitlement agent;
each entitlement agent has a map for representing entitlements that have been given to
the receiver;
the message further specifies a given entitlement agent; and
the message starting entitlement ID and the message map are used to set a starting
entitlement ID and a map in the list for the given entitlement agent].
16. (Once Amended) The method [apparatus] of claim 15, wherein the map represents a
sequence of entitlement IDs.
17. (Once Amended) The method [apparatus] of claim 16, wherein the starting entitlement
ID is the first entitlement ID in the sequence of entitlement IDs.
18. (Once Amended) The method [apparatus] of claim 17, wherein the sequence of
entitlement IDs is a list.
19. (Once Amended) The method [apparatus] of claim 17, wherein the sequence of
entitlement IDs is contiguous in the memory.
20. (Once Amended) The method [apparatus] of claim 19, wherein the map is a bit map
representing the presence or absence of entitlements for the receiver for instances of service.

21. (Once Amended) The method of claim 17, wherein:
the map is represented by an array whose elements have entitlement values that represent the presence or absence of entitlement [values]; and
the difference between the starting entitlement ID and the entitlement ID of the given instance of service is used to determine the index value for an element in the array, wherein the element having the index value represents the entitlement value of the given instance of service.
23. (Once Amended) The method of claim 15, wherein:
the receiver is given entitlements by at least one entitlement agent; and the method further includes the steps of:
putting a specification of a given entitlement agent in the message, wherein the receiver uses [using] the specification to locate a list whose elements include an apparatus for representing entitlements and uses [using] the representation of entitlements [apparatus] in the message to set the [an] apparatus in the list for the given entitlement agent.
29. (Once Amended) A receiver for receiving instances of service and entitlement IDs associated therewith and entitlement values for the entitlement IDs, the receiver comprising:
[a port for receiving instances of service and at least a first message having an entitlement ID associated with a given instance of service;]
a memory [coupled to the port] having a starting entitlement ID and an indexed map of [including] entitlement values that have been given to the receiver stored therein, wherein the map of entitlement values includes a particular entitlement value for a given instance of service having a particular entitlement ID associated therewith;[, wherein]
a processor in communication with the memory adapted to use the starting entitlement ID [is used] in conjunction [with the map and] with the particular [an] entitlement ID associated with the given instance of service to determine an index into the map for determining the particular entitlement value, wherein responsive to the particular entitlement value being a predetermined value, the receiver is entitled to the given instance of service, and responsive to the receiver being entitled the processor [the entitlement of the receiver for the given instance

of service, and wherein the receiver] grants access to the given instance of service [only if the receiver is entitled to the given instance of service].

31. (Once Amended)The receiver of claim 30, wherein the sequence of entitlement IDs corresponds to [is] a discrete list of entitlement IDs.